

## LONGEVITY OF BACTERIA IN THE PRESENCE OF LACTIC ACID.

Darbois (C. R. Soc. Biol. 1910) finds that *Micrococcus Melitensis*, which is not a particularly hardy species, survives exposure to a lactic ferment in milk as much as 18 days. This suggests that contaminated milk may thus carry infection in products made from it for considerable periods.

## CROSSING IN SPIROGYRA.

Andrews (Bull. Tor. Bot. Club, 1911) notes the discovery of conjugation of *Spirogyra crassa* and *Spirogyra communis*. Reciprocal crosses were found, tho usually the protoplasm of *S. communis* moved over into *S. crassa*. It is to be hoped that there may be later studies of the hybrids after the germination of the zygopores, which are said to be normal in appearance.

## A RED EUGLENA.

Hardy (Victorian Nat., 1911) describes a new Euglena, which he calls *E. rubra*, from near Melbourne, Victoria. It occurs in the same locality with *E. viridis*. The author gives a full account of its structure, habits, and divergence from *E. viridis*.

## EFFECT OF X-RAYS ON SEX CELLS.

Nogier and Regand (Compt. Rendu. Soc. Biol., 1911) report that complete castration and destruction of semen-producing cells in adult cats and dogs is possible, without injury to intermediate tissues, by means of X-rays.

## METHODS OF WORK FOR MICROSCOPISTS.

It is desired that this department shall become of real value to the members. To this end the readers are urged to send in brief, yet clear and complete, accounts of successful devices or methods in connection with any department of microscopy. Quite a number of members have expressed a wish for some such clearing house of practical suggestions for the use of student and teacher. (Ed.)

## CLEARING LARGE OBJECTS.

O. Schultze recommends the following clearing process to prepare for the examination of somewhat pigmented, or otherwise

opaque, objects *in toto*. It will clear such objects as tadpoles, worms, etc., so that the internal organs may be studied. Use:—

1 per cent Chromic acid.....80 c. c.  
 Eau de Javelle..... 5 c. c.  
 Potash .....10 drops

This fixes, depigments, and clears.

#### SEXUAL FUSIONS IN YEAST.

A. Guilliermond (Compt. Rendu, 1911) has observed fusion of yeast cells preliminary to the formation of ascospores. He believes that he has established that the common parthenogenetic formation of asci marks a retrogression from the copulating condition, such as is well known in species of *Saprolegnia*.

#### PHOTO-MICROGRAPHY.

In a little hand-book entitled "Elementary Photo-Micrography" Mr. Walter Bagshaw undertakes to make easy, or at least pleasant and hopeful, the way of the beginner who cannot take the time, nor undergo the expense, necessary to operate an elaborate and costly apparatus. The chief excellence of the book consists in its simple direct style; in its avoidance of unnecessary technical details, however interesting; in its common-sense appliances and devices. By means of the book any worker with the microscope, who has knowledge of photography, will be able at once to combine the two knowledges in such a way as to make a permanent record of the things that interest him.

The various chapters deal with such subjects as these: How to make a simple microscopic outfit; Photo-Micrography without a microscope; Illumination; Focussing, Measuring amplification; Exposure; Requisites for development—and rules for developing, fixing, clearing, intensification, reduction, printing, etc.; Lantern slide making. There are also appendices containing information useful to the operator.

Elementary Photo-Micrography, by Walter Bagshaw, with 103 pages and illustrations. Second Edition. 2/6 net. Iliffe & Sons, Lim., London.